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Title :

Low temp. viscosity and pumpability of lubricating oils - improved by minor addn. of ethylene, alpha-olefin copolymer of define sequence distribution

Derwent Classes :

A18 A97 H07

Patent Assignee :

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16

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US4507515 A 19850326 DW1985-15 9p *

AP: 1983US-0564018 19831221

EP-147158 A 19850703 DW1985-27 Eng

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DSR: AT BE CH DE FR GB IT LI LU NL SE

AU8437116 A 19840704 DW1985-33

NO8405140 A 19850715 DW1985-35

DK8406119 A 19850622 DW1985-41

BR8406614 A 19851015 DW1985-46

JP60228600 A 19851113 DW1986-01

AP: 1984JP-0267622 19841220

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EP-303333 A 19890215 DW1989-07 Eng

AP: 1988EP-0201888 0

DSR: AT BE CH DE FR GB IT LI LU NL SE

CA1249579 A 19890131 DW1989-12

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A3...8652; No-SR.Pub

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Abstract :

US4507515 A

Compsn. comprises: (a) a major amt. of an oil of lubricating viscosity, showing improved viscosity and pumpability at low temp; and (b) an effective amt. of a C2H4-alpha-olefin copolymer, comprising a major portion of (b1) a copolymer of Mw (wt.average mol. wt.) about 10,000-500,000, Mooney viscosity at 100 deg.C about 0.5-500, thickening efficiency 0.4-4.0 and ethylene content 10-60 wt.%, the mean number of C2H4 units in sequences of 3 units or more being about 3-4.5, and the fraction of the total number of C2H4 sequences contg. 3 or more units being about 0.01-0.30, and a minor portion of (b2) a copolymer of Mw 1000-2,000,000 and C2H4 content 55-95 wt.%, the mean number of C2H4 units in sequences of 3 units or more being about 4-20, and the fraction of the total number of C2H4 sequences contg. 3 or more units being about 0.35-0.95. Also claimed are compsns. contg. as additives: (b1) alone; (b2) alone; or a polymeric VI improver and (b2).

ADVANTAGE - Component (b1) improves the VI. (b2) improves the viscosity and pumpability at low temp. (e.g. 0 to -40 deg.C) in presence of (b1) or other polymeric VI improver. SAE 10w grade oils show highly desirable MRV viscosities of 30,000 or less (pref. 20,000 or less). SAE grades 5w, 15w and 20w also show desirable low-temp. viscosity. (0/0)

EP Equiv. Abstract :

EP-147158 B

A lubricating oil composition comprising a major amount of an oil of lubricating viscosity and, to reduce viscosity and improve pumpability at low temperature, from 0.001 to 49 wt.% of an ethylene-alpha-olefin copolymer having a Mw of 1,000 to 2,000,000, an ethylene content of 55 to 95 wt.% ethylene, an ethylene sequence distribution such that the mean number of ethylene in sequences equal to or greater than three consecutive ethylene units is a value of from 4 to 20 and the fraction of ethylene sequences of three or more consecutive ethylene units is from 0.35 to 0.95, based on the total number of ethylene sequences. (14pp)

Manual Codes :

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